

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003957**Date Inspected:** 18-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

OBG Bay 1:

The QA Inspector randomly observed ZPMC welders Gao Xin Dong ID Number 059361, Jiang Ting Guang ID Number 062265, Xu Guo Yin ID Number 059443, and Chen Jie ID Number 059468, utilizing Gantry 2 mounted welding apparatus with the Gas Metal Arc Welding (GMAW) Process in the 2G (Horizontal Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U1(U-Rib)-3, to weld the root pass of the U-Ribs to 4-Rib Deck Plate Sub-Assembly 2AW-DP548-002 at Weld Joint (WJ) Numbers DP548-001-003/004(U-238) and 007/008(U-284). The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Sun Wei, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 375/368 amps, 30.7/31.2 volts (WJ's 003/004) for Mr. Gao/Mr. Jiang; 360/370 amps, 30.8/31.1 volts (WJ's 007/008) for Mr. Xu/Mr. Chen with a travel speed of 526 millimeters (mm) per minute for all welders. The weld parameters appeared to comply with contract requirements. The attached photographs provide additional detail.

The QA Inspector randomly observed ZPMC welder Dong Yiqun ID Number 059450, utilizing the Flux Cored Arc Welding (FCAW) Process in the 3F Position with ZPMC WPS WPS-B-T-2133, to fit up and tack weld 8 mm diaphragms in various deck plate U-Ribs for Deck Plate DP087-001 at WJ's 12, 21 and 30. The QA Inspector randomly observed ZPMC QC monitoring weld parameters.

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OBG Bay 2:

The QA Inspector randomly observed ZPMC machine operators, utilizing magnetic drills with templates, to drill put bolt holes in various T-Rib connection plates.

OBG Bay 3:

The QA Inspector randomly observed ZPMC welder Xiao Lin ID Number 049485 utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112-FCM, to tack weld 35 mm I-Ribs to Deck Plate Sub-Assembly DP516-001 WJ's 005/006. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

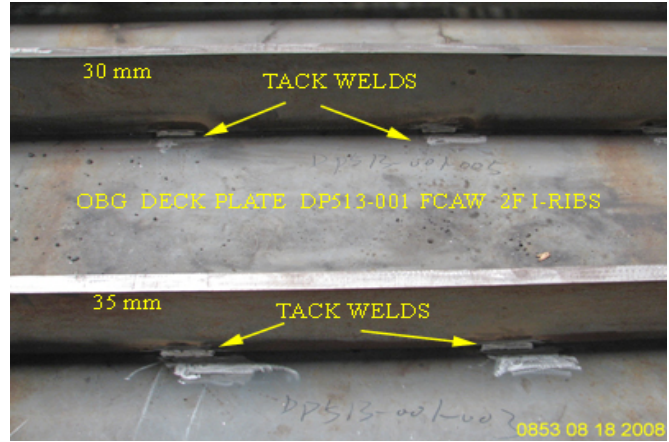
The QA Inspector randomly observed ZPMC welder Wang Fei ID Number 051786, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112-FCM, to tack weld a 35 mm I-Ribs(WJ's 001/002) and a 30 mm I_Rib(WJ's 003/004) to Deck Plate Sub-Assembly DP623-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Xiao Di ID Number 203204, utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112-FCM, to tack weld a 35 mm I-Rib(WJ's 001/002) and 2 each 30 mm I_Ribs(WJ's 003/004 and 005/006) to Deck Plate Sub-Assembly DP513-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welders Li Zhao Qian ID Number 048810 and Xin Meng ID Number 053742, utilizing Gantry 1 mounted welding apparatus with the FCAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-2132-3, to weld 35 mm I-Ribs to 2-Rib Edge Plate Sub-Assemblies EP099-001(WJ's 003-004) and EP110-001(WJ's 003/004. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 302/285 amps, 30.4/30.6 volts (WJ's 003/004 DP099-001) for Mr. Li and 285/280 amps, 30.9/30. volts (WJ's 003/004 DP110-001) for Mr. Liu with a travel speed of 480 mm per minute for both welders. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

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Summary of Conversations:

As noted in the above body of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Carreon,Albert

QA Reviewer